The remaining tracks exhibit the usual features, the motion of the storm center in that portion of the track to the southward of 25° being directed toward a point between north and west, recurving at some point situated in general between 25° and 35°, and thence moving in a northeasterly direction. The position of this point of recurvature, or point of greatest westing, is given in the following table, in which the storms are arranged with reference to the date of recurving, without regard to the year:

Location of recurvature.

No.	Year.	Date.	Lat. N.	Long. W.	No.	Year.	Date.	Lat. N.	Long. W.
			° ′	° ′				° ′	° ′
7	1892	Aug. 19.....	28 30	67 30	17	1896	Sept. 22....	30 10	74 45
8	1893	Aug. 20.....	29 00	76 00	11	1894	Sept. 25....	25 16	82 12
3	1891	Aug. 28.....	36 00	64 00	18	1896	Sept. 28....	25 00	85 00
1	1890	Aug. 29.....	29 00	70 12	6	1891	Oct. 5.....	39 00	68 06
24	1899	Sept. 1	20 20	72 20	12	1894	Oct. 8.....	27 48	88 12
4	1891	Sept. 6	33 30	72 48	19	1896	Oct. 10.....	29 00	76 10
25	1899	Sept. 11	28 00	68 10	13	1894	Oct. 15.....	23 00	68 00
23	1899	Sept. 13	28 00	80 10	15	1895	Oct. 20.....	20 30	82 48
22	1898	Sept. 17 ..	30 00	71 10	14	1894	Oct. 24.....	26 10	75 00
5	1891	Sept. 21 ...	32 30	64 36					

From this table it will be evident to the masters of vessels frequenting West Indian waters and exposed to the violence of West Indian hurricanes that to rely upon the assertion that the storms of a particular month recurve within certain fixed and narrow limits of latitude may lead them into serious error at a most critical time. Thus the table shows that the hurricanes of September, instead of recurving between 27° and 29°, as formerly maintained, may in actual practice recurve in any latitude from 20° 20′ N. to 33° 30′ N.; likewise those of October, instead of recurving in latitude 20° to 23° N., may continue their northwesterly course until the parallel of 30° is attained.

The mariner, like the forecaster, must always be on his guard against unexpected departures from normal types of storms and weather.

METEOROLOGY IN THE SCHOOLS.

Occasionally we are cheered by discovering an additional enthusiastic voluntary observer and teacher. The following letter from such an one breathes the right spirit and is worthy of record:

Two weeks ago we received notice from the Central Office that if we would contract to keep an unbroken series of observations, the Weather Bureau would establish a voluntary station at our college. Matters were soon arranged so that this would be possible, and the instrument shelter, rain gage, maximum and minimum thermometers, and record blanks have been received. As soon as the shelter can be put in place we shall begin regular observations. The college has purchased from Friez a barometer, barometer case, and sling psychrometer, all of which arrived on Saturday. The barometer is now hanging in the library, where it can be seen by all, and as soon as our classes in physical geography are well started there will be an intelligent interest taken in this instrument. Last night I explained its general principles to our librarian, who had never seen one before and had no idea of its construction or object.

I find that in order that this institution may be the general source of broad instruction that it ought to be, some one must take hold of those sciences in which I happen to have a general interest. I want this college to be an inspiration to the public school teachers in the State and their central authority for teaching and training in science. Our president feels an interest in meteorology and allied subjects, and we ought to be able to develop them here. I am introducing more laboratory work into this year's courses, but all our work must be of an elementary character as compared with that of the great universities.

If we science teachers at this place are to make the best of our opportunities to acquire an influence along educational lines, we must struggle against the natural tendency toward narrow sympathies; we must avoid too much specializing; we must give our pupils such instruction as will enable them to take an intelligent, because a practical, interest in all the important lines along which human knowledge is developing to-day. One of the reasons why we endeavored to secure a voluntary station at this college was the conviction that an every day acquaintance at first hand with the methods, instruments, and phenomena of meteorology will lead our students to acquire a truer and more sympathetic appreciation of the work of the U. S. Weather Bureau.

The daily map from our State center is displayed on a bulletin board in our front hallway, and in January the State section director is to give us a talk on practical meteorology.

REPLIES TO CORRESPONDENTS.

A correspondent sends the Editor a series of questions such as may possibly have occurred to others among our readers, and we therefore submit a portion of the reply for their information.

Violent thunderstorms visit the regions within 30 miles south of the St. Lawrence River during a great part of the summer. Three years ago, namely, in March, 1896, a "cyclone," as it is called by the country people, struck our place, throwing down barns, carrying a child several hundred yards, etc. From all I learn the tornado came from the west. In the face of all this, I want to know:

1. Is this region not supposed to be exempt from tornadoes?
2. Do not the mountainous features of the locality tend to break up the motion of the tornado?
3. Is the tornado more likely to strike places on an elevation than those in a valley or near a river?
4. Is an isolated house in the country safer with, or without, a lightning rod?
5. Is a stone house safer than a wooden one? The country people say that lightning kills the fruit of plum trees, singles out the fir tree for its shafts, but will never strike a beech, and that brilliant "northern lights" presage a storm. Is there any truth in these sayings?

We have no exact observational data relating precisely to all the matters involved in these questions, but it is allowable oftentimes to reason by analogy from what we know to that which would probably happen under analogous circumstances.

1. The northern limit of tornadoes has not yet been fixed by observations, but the data from Canadian, and especially United States Weather Bureau stations, would lead to the conclusion that along the southern bank of the St. Lawrence River one tornado is likely to occur within a region of 10,000 square miles, or 30 miles wide by 333 long, about once in ten years (see MONTHLY WEATHER REVIEW, Vol. XXV, p. 250). But the storm alluded to as having occurred in March, 1896, was probably not a tornado. The fact that the country people called it a "cyclone" has nothing whatever to do with its true character and simply shows that they do not understand the meaning of that word. A tornado is not only a violent wind, but one accompanied by a peculiar cloud formation. The under side of a cloud appears to suddenly extend downward to, or near to the earth, and this cloud column is seen to be in rapid rotation. It is not made up of an ascending mass of dust or water, but it is ascending air within which the cloud formation stretches downward. Those who do not actually see such a funnel-shaped cloud should call the storm a gust of wind or a violent wind, but not a tornado, and still less a cyclone. Winds that are violent enough to carry men and animals along horizontally, in spite of their own wills, may occur in connection with hurricanes and blizzards, but do not of themselves constitute tornadoes.

2. A mountainous locality is not apt to have a tornado. Severe thunderstorms of wind and cloudbursts of rain may occur, but a genuine tornado is almost unknown among high mountains. The reason for this is not because the mountains tend to break up the motion of the tornado, but rather because the mountains facilitate the formation of smaller and less violent windstorms, and because mountain air is cooler and drier, so that the atmosphere has no chance to pile up the great cumulus clouds, beneath which the tornado is formed.

3. A tornado often rises and descends alternately. The surface winds rush toward the low pressure within the funnel, and wherever the funnel cloud itself descends to the ground or near it there the great injury is done. Available statistics are not very clear as to whether a hill several hundred feet high can break up a tornado temporarily. Along the path of a tornado there are always some regions of greater and others of less destruction; in the latter the tornado funnel has simply risen above the ground, and such rises have no clear connection with hills and valleys. They probably depend almost entirely upon the mechanical actions going on overhead within the cloud, from which the tornado draws all its power.